900 SERIES CARTRIDGE TYPE LED Lamps

LITTELITES®
A Lighting Components and Design Product Line

Overview

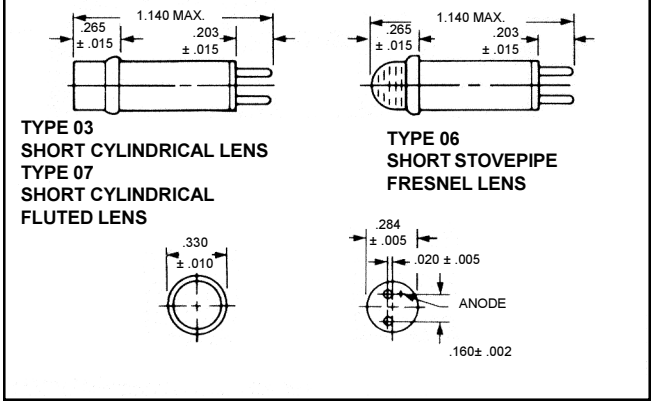
The 900 Series LED cartridge lamp mates with 910 Series lampholders. Constructed with an aluminum case, 900 Series LED lamps are noted for high resistance to shock and vibration, long life, and low power requirements. These may be ordered with multiple lens styles and lens colors.

Approvals

UL Recognized and CSA Certified.

Specifications

Sleeve: Aluminum. Black anodized finish standard; clear anodized finish optional.
Termination: .040" diameter stainless steel pins mounted in a nylon header. The anode is identified on the header as the + pin connection.
LED DC Voltage options: 1.8 to 28 volts.
Lens: Heat resistant, high strength polycarbonate.
Lens Marking: Cylindrical lenses may be stamped. Contact factory.



ORDERING INFORMATION:

EXAMPLE: 900 1 60 J 06 1 RN

- 900 — Series Number
- 1 — Termination
- 60 — Lamp Code
- J — Resistor
- 06 — Lens Type
- 1 — Sleeve Finish
- RN — Lens Color

Red LED (60) · Built-in 330 OHM Resistor (J) · Short Stovepipe Lens (06) · Black Anodized Finish (1) · Red Non-Diffusing Lens (RN)

Series Number	Termination	Lamp Code	Resistor			Lens Type	Sleeve Finish	Lens Color
			Code	Current	Volts			**Nondiffusing (Clear)**
900	**1** Stainless steel pins standard **A** Tin-plated stainless steel pins for printed circuit board mounting	**60** (Red LED) **6 6** (Green LED) **6 8** (Yellow LED)	**Nominal 10 mA**			**03** Short Cylindrical **06**[2] Short Stovepipe Fresnel **07**[2] Short Cylindrical Fluted	**1** Black Anodized-standard **2** Clear (Silver) Anodized	**CN** Colorless (60,66,68)[3] **WN** White (60,66,68)[3] **AN** Amber (68)[3] **GN** Green (66)[3] **RN** Red (60)[3] **YN** Yellow (68)[3]
			X	NONE	1.8			
			U	200 OHM	3.6			
			J	330 OHM	5			
			W	430 OHM	6			
			Y	820 OHM	10			
			K	1000 OHM	12			
			G	1200 OHM	14			
			L	2700 OHM	28			
			Nominal 20 mA					
			V	100 OHM	3.6			
			M	180 OHM	5			
			P	220 OHM	6			
			Z	390 OHM	10			
			N	620 OHM	14			
			H	1300 OHM	28			

[2] **Recommended for best light distribution.**
[3] **Lamp Code Number. When specifying lens color, use only with lamp codes shown.**

900 SERIES CARTRIDGE TYPE Incandescent Lamps

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Overview

The 900 Series incandescent cartridge lamp mates with 910 Series lampholders. Constructed with an aluminum case, 900 Series incandescent lamps are noted for high brightness. These may be ordered with multiple lens styles and lens colors.

Approvals

UL Recognized and CSA Certified.

Specifications

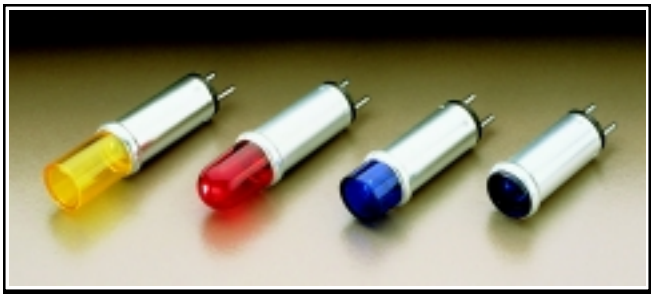
Sleeve: Aluminum. Clear anodized finish standard; black anodized finish optional.

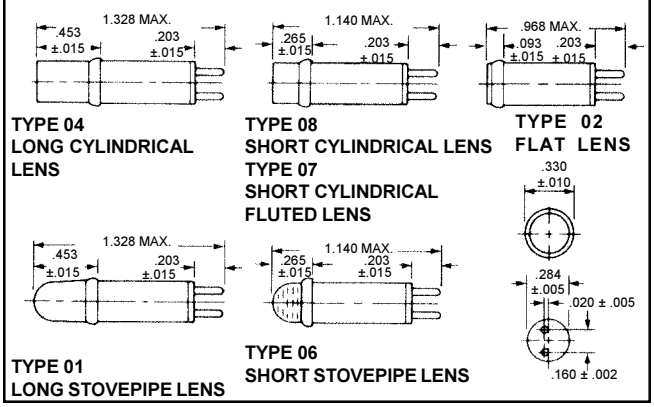
Termination: .040" diameter stainless steel pins mounted in a nylon header.

Incandescent AC or DC Voltage options: 1.35 to 28 volts.

Lens: Heat resistant, high strength polycarbonate. Translucent lens colors are normally used for incandescent cartridge lamps as they give an evenly diffused light over the lens surface. When Type 08 (short cylindrical) lens is used in the 910 Series holder with a screw-on lens cap, specify "colorless nondiffusing" for 08 lens color.

Lens Marking: Cylindrical lenses may be stamped. Contact factory.





ORDERING INFORMATION:

EXAMPLE: 900 1 06 X 08 2 CN

- 900 — Series Number
- 1 — Termination
- 06 — Lamp Code (2.7V Lamp)
- X — Resistor (NONE)
- 08 — Lens Type (Short Cylindrical Lens)
- 2 — Sleeve Finish (Clear Anodized Finish)
- CN — Lens Color (Colorless Nondiffusing Lens)

Series Number	Termination	Lamp Code	Lamp Volts	Lamp MA	Lamp MSCP	Lamp Life (Hrs)	Resistor	Lens Type	Sleeve Finish	Lens Color
900	1 Stainless steel pins standard A Tin-plated stainless steel pins for printed circuit board mounting	05[2]	1.35	60	.01	3,000	X (NONE)	01[3] Long Stovepipe 02[4] Flat 04 Long Cylindrical 06[5] Short Stovepipe Fresnel 07[5] Short Cylindrical Fluted 08[4] Short Cylindrical	1 Black Anodized 2 Clear (Silver) Anodized standard	**Nondiffusing (Clear)** AN Amber BN Blue CN Colorless GN Green RN Red WN White (Cloudy) YN Yellow **Translucent** AT Amber BT Blue GT Green RT Red WT White YT Yellow
		06[2]	2.7	60	.04	6,000				
		07[2]	3.0	15	.003	10,000				
		17	5.0	60	.03	30,000				
		10	6.0	40	.04	10,000				
		16	6.0	60	.13	3,000				
		11	6.0	200	.60	1,000				
		01	6.3	40	.03	20,000				
		12	6.3	200	.55	5,000				
		02	6.3	200	.40	20,000				
		08[2]	10.0	14	.006	50,000				
		09[2]	10.0	40	.08	5,000				
		18	12.0	40	.10	10,000				
		13	14.0	80	.50	1,500				
		03	14.0	80	.30	15,000				
		20[2]	14.0	17	.03	25,000				
		21[2]	18.0	20	.08	15,000				
		14	18.0	40	.15	10,000				
		15	28.0	40	.34	4,000				
		19	28.0	40	.15	10,000				
		04	28.0	40	.30	7,000				

[1] **MSCP - Mean Spherical Candle Power.**
[2] **Because of relatively low light output, these lamps should be used with non-diffusing (clear) lens colors only. Lamp ratings are compiled from a leading lamp manufacturer's catalog.**
[3] **Best suited for wide angle viewing.**
[4] **For High Temperature application, contact factory.**
[5] **Nondiffusing lens colors only. Types 06 and 07 are recommended for best light distribution.**

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900/901 SERIES CARTRIDGE TYPE Neon Lamps

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Overview

The 900 Series neon cartridge lamp mates with 910 Series lampholders. Constructed with an aluminum case, the 900/901 series neon lamps are ideally suited for 125 volt applications. The 901 series cartridge lamps are 0.125" longer than the 900 series to accept blue or green neon lamps and mate with the 911 series lampholders. Please consult the table below.

Approvals

UL Recognized and CSA Certified.

Specifications

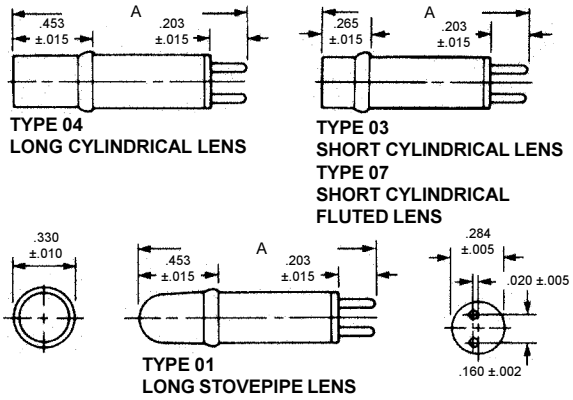
Sleeve: Aluminum. Clear anodized finish standard. Black anodized finish optional.

Termination: .040" dia. stainless steel pins mounted in nylon header.

Voltage options: Std. Brightness, 105 to 125 AC or DC volts. **High Brightness**, 110 to 125 AC volts. **Green Neon**, 115 to 125 AC or DC volts. **Blue Neon**, 105 to 125 AC volts or 105 to 150 DC volts.

Lens: Heat resistant, high strength polycarbonate. When type 03 (short cylindrical) lens is used in a 910 or 911 Series holder with a screw-on lens cap, specify "colorless nondiffusing" for 03 lens color. **Lens Marking:** Cylindrical lenses may be stamped. Contact factory.

Lens Type	Dimension A in Inches (Max.)	
	900 Series	901 Series
01	1.328	1.453
03	1.140	1.265
04	1.328	1.453
07	1.140	1.265



ORDERING INFORMATION:

EXAMPLE: 900 1 50 X 01 2 AN

- 900 — Series Number
- 1 — Termination
- 50 — Lamp Code: Standard Brightness A9A Lamp
- X — Resistor: No Built-in Resistor
- 01 — Lens Type: Long Stovepipe Lens
- 2 — Sleeve Finish: Clear Anodized Finish
- AN — Lens Color: Amber Non-diffusing Lens

Series Number	Termination	Lamp Code	Resistor Code	Resistor: Internal Resistor Value
900 901	1 Stainless steel pins standard A Tin-plated stainless steel pins for printed circuit board mounting	Note: Reference Lamp Selection Guide.	X[5]	No Built-In Resistor
			C	56K OHM, 3K Life Hrs.
		52[1] Standard Brightness A1B	E	100K OHM, 15K Life Hrs.
			T	150K OHM, 25K Life Hrs.
		53[1] High Brightness A1C	X[5]	No Built-In Resistor
			A	22K OHM, 5K Life Hrs.
			S	33K OHM, 25K Life Hrs.
			C	56K OHM, 25K Life Hrs.
		50[2] Standard Brightness A9A (NE2E)	X[5]	No Built-In Resistor
		51[2] High Brightness C2A (NE2H)	X[5]	No Built-In Resistor
		56[3] Green Neon	B	30K OHM, 10K Life Hrs.
		57[4] Blue Neon	B	30K OHM, 10K Life Hrs.

Lens Type	Sleeve Finish	Lens Color
01[6] Long Stovepipe	1 Black Anodized	Nondiffusing (Clear)
03 Short Cylindrical		AN Amber CN Colorless RN Red WN White YN Yellow BN[8] Blue GN[8] Green
04 Long Cylindrical	2 Clear (Silver) Anodized	
07[7] Short Cylindrical Fluted	Standard	

[1] Use with lens colors AN, CN, RN, WN, or YN.
[2] For use on 900 series only with type 01 and 04 lenses.
[3] For use on 901 series only with lens colors GN, CN, or WN.
[4] For use on 901 series with lens colors BN, CN, or WN.
[5] External resistor required.
[6] Best suited for wide angle viewing.
[7] Recommended for best light distribution.
[8] For 901 series only when used with blue or green lamp respectively.